

MiG-21 / MiG-21F - FISHBED

DATA FOR 2015 (in progress)

E-4 / E-5 / MiG-21 - FISHBED-A

E-6 - FISHBED-B

MiG-21F - FISHBED-C

★★★★

Frontline fighter. Developed by OKB-155 (A.I. Mikoyan and M.I. Gurevich Design Bureau). Work on the fighter began in 1952. In the summer of 1953, the USSR Council of Ministers issued a Resolution ordering the development of aircraft designed for high supersonic speeds. The A.I. Mikoyan Design Bureau began work on the E-1 fighter project with a swept wing and an AM-11 engine developed by A.A. Mikulin. Due to a delay in engine development, the aircraft design was changed to accommodate the AM-9B engine with a thrust of 3,250 kg from the MiG-19. The new fighter received the E-2 codename; it differed from the E-1 in its aerodynamic ridges under the tail section of the fuselage and split slats. At the same time, work began on a version of the E-5 fighter with a delta wing and the same AM-11 engine. For the same reasons, the design was changed to the E-4 with an AM-9B engine with a thrust of 3,250 kg.

The first prototype with swept wings E-2 (later called MiG-23 - the first with this name) made its first flight on February 14, 1955 (test pilot G.K. Mosolov). The first prototype with a delta wing E-4 was built in 1955 and made its first flight on June 16, 1955 (test pilot G.A. Sedov). During tests, the E-4 showed a maximum speed of 1,296 km / h, while the S-1 of the P.O. Sukhoi Design Bureau exceeded 2,000 km / h during tests. During the modification, the E-4 aircraft had a new wing - instead of one large aerodynamic ridge located under the wing, three small ones were installed above the wing, the wingtips were cut off. The RD-9B engine was replaced with an RD-9I. The modified E-4 made its first flight on September 5, 1956 (test pilot G.A. Sedov).

Construction of the second experimental E-4 based on the E-5 project began in 1955. The aircraft was immediately equipped with a modified wing with upper aerodynamic ridges and a sweep of 57 degrees. The aircraft was designed for the RD-11 (AM-11) engine. The E-5 prototype made its first flight on January 9, 1956 (test pilot V.A. Nefedov). During testing, the aircraft received the official name MiG-21. At the end of 1957, development of the E-2 / MiG-23 aircraft with swept wings was discontinued. Testing of the E-5 was completed in May 1958. In total, more than 100 and 98 flights were made on the E-4 and E-5 aircraft, respectively (250 flights were made on all E-2 and E-2A models).



MiG-21F-13 fighter, board No. 84 "red" of the "Aggressor" squadron of the US Air Force. The aircraft was previously in the Indonesian Air Force. Tonopah airfield, 1986 (<http://airwar.ru>).

Author: [DIMMI](#)

Created: 16.03.2009 23:37:11

Comments: [65](#)

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Ka-52 - HOKUM-B

DATA AS OF 2015 (standard replenishment)

Ka-52 / Ka-52A "Alligator" / product 806 / R&D "Avangard-1" - HOKUM-B

Ka-52K - HOKUM-B mod.

★★★★

All-weather, round-the-clock combat helicopter / command helicopter of army aviation. Developed for the Russian Air Force by Kamov JSC (Lyubertsy) under the R&D "Avangard-1", General Designer - Sergey Mikheev. Serial production is carried out by Progress AAK JSC (Arsenyev, Primorsky Krai). Proposals to create a specialized helicopter complex for reconnaissance, target designation and coordination of attack helicopter groups within the framework of the B-60 project were put forward by Kamov Design Bureau in 1984. The complex was supposed to use a radar and an OLS. In the early 1990s, a decision was made to use the developments in this complex on a two-seat modification of the Ka-50 helicopter. Development of the Ka-52 helicopter based on the attack Ka-50 began in 1994, and in September 1994, a model of the new helicopter was presented, which was first shown at the MAKS-1995 air show.

Production of the Ka-52 prototype began at the Kamov Design Bureau's pilot production facility in 1996. The Ka-52 prototype was created by reworking a production Ka-50, serial No. 01-02 (previously onboard No. 021). Production of the prototype was completed in November 1996. On November 19, 1996, the prototype - onboard No. 061 - was shown to journalists. The first flight of the Ka-52 prototype took place on June 25, 1997, piloted by A. Smirnov. The first helicopter of the pilot factory batch made its first flight in Arsenyev on June 27, 2008. In total, two pilot Ka-52 helicopters were built in 2008. Thus, three pilot helicopters were submitted for state joint testing. In 2008, during the state joint testing, a preliminary conclusion was received on the release of the pilot batch of Ka-52 helicopters.

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- Bombers/Strike Aircraft
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- Air-to-air missiles
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	84,775		28,249
	71,414		27,491
	62,144		25,074

FLAG count

Latest comments

Electronic warfare complex K

PPP Wrote:...After all, Donald Coo has enough RTR systems - he was guaranteed to "write"...

[Big Prison](#) 2017-11-01 18:47

Electronic warfare complex K

Altimeter Wrote:...If the reason for absence of the first is known, then Voodoo was not bad...

[Bolshoy Prison](#) 2017-11-01 18:28

Electronic warfare complex K

PPP Wrote:Max Wrote:data on no use of Khibiny ...There are general rules of counteraction...

[Altimeter](#) 2017-11-01 17:46

Electronic warfare complex K



Ka-52, side No. 22, yellow, Chernigovka airbase, 06.03.2013 (<http://pressa-tof.livejournal.com/>).

Author: [DIMMI](#)

Created: 09/15/2011 12:12:09

Comments: [58](#)

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Tu-22 Registry - BLINDER / BEAUTY

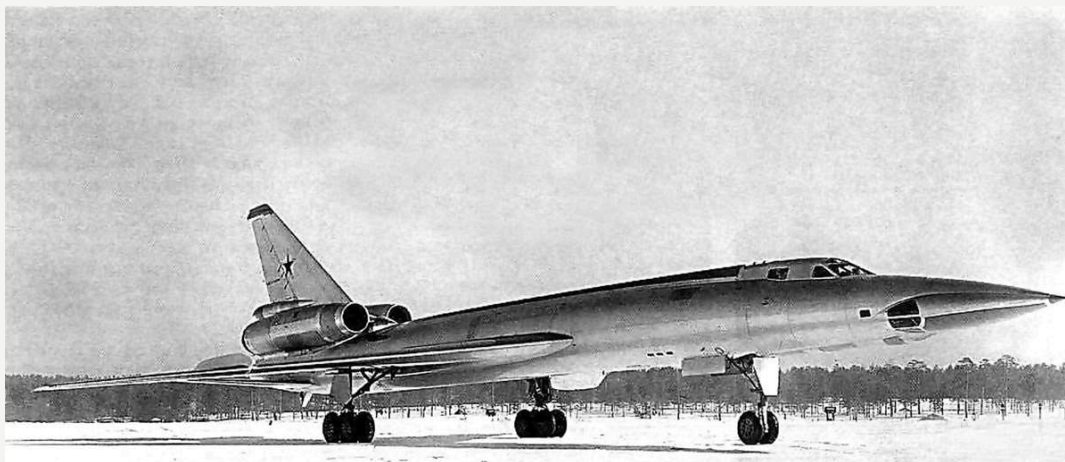
DATA FOR 2015 (in progress)

Tu-22 Registry - BLINDER / BEAUTY

[Main article on Tu-22](#)



Special thanks to the user "Arkan" of the site <http://aviaforum.ru/> for his contribution to collecting information on Tu-22 aircraft - these materials formed the basis of this article.



Aircraft 105 serial No. 01-00 - the first prototype of Tu-22 (<http://aviadejavu.ru> , processed).

Author: [DIMMI](#)

Created: 10.01.2015 00:50:07

Comments: [1](#)

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Tu-22 BLINDER / BEAUTY

DATA FOR 2015 (in progress)

Tu-22 - BLINDER-A,B,C,D,E,F,G (formerly - BEAUTY)

[Tu-22 Registry](#)



Medium bomber. Work on the aircraft (R & D) began after the Resolution of the USSR Council of Ministers dated August 10, 1954. Chief Designer - D. Markov. Preliminary work was carried out on projects 98 (Tu-98), 105 (Tu-22 prototype, draft design completed in autumn 1954) and 108 (intercontinental supersonic carrier with a delta wing, R & D - 1956). On prototype 105 (Tu-105) the chassis retracted into the fuselage. In late 1954, tests of the Tu-105 models began at TsAGI. Full-scale design work began in 1955. Built in December 1957. The first flight of the Tu-105 prototype (product 105, aircraft "Yu") - June 21, 1958 (pilot Yu. Alashev, navigator-operator I.E. Gavrilenko, gunner-radio operator K.A. Shcherbakov). April 1958 - start of work on project 105A in two versions (with VD-7M and NK-6 engines). Start of serial production at the Kazan Aviation Plant - August 1959. First flight of 105A (Tu-22) - September 7, 1959 (pilot - Yu. Alashev, navigator - I. Gavrilenko, operator - K. Shcherbakov). After the crash on December 21, 1959, the serial plant abandoned the elevators in favor of an all-moving stabilizer. The first flight of the serial Tu-22B No. 201 - September 2, 1960 (pilot V.R. Kovalev, navigator-operator V.S. Paspornikov, gunner-radio operator K.A. Shcherbakov). Adopted into service - 1960-62 (Tu-22B - the first serial modification, a total of 10 units were built - was not in service). It entered service with the Air Force in 1962. In December 1969, production of the Tu-22 ceased, a total of more than 311 Tu-22 units were serially produced.

And a video-schmideo to boot
<https://youtu.be/kOcQ3ru4QUE> pa
fa

[oldstaryi](#) 2017-10-31 20:43

Electronic warfare complex K

In principle, so much has been written about Khibiny that, thanks to some, it is not entirely...

[oldstaryi](#) 2017-10-31 20:37

Electronic warfare complex K

Photo of the piece of iron itself

[Sierra](#) 2016-09-18 16:10

Electronic warfare complex K

The material, of course, is not entirely appropriate, but it fits in with the discussion here...

[osankin](#) 2014-09-09 12:05

Electronic warfare complex K

PPP Wrote: Moreover - you can't explain why they are suppressing Aegis radars at such a low...

[Artist](#) 2014-09-09 00:12

Electronic warfare complex K

Max Wrote: Ok, thanks for the answer, frankly speaking, not a sin answer to those...

[Artist](#) 2014-09-08 23:43

Electronic warfare complex K

Max Wrote: data on the non-use of Khibiny ...There are general rules counteracting the means...

[PPP](#) 2014-09-05 18:28



Tu-22KD, tail number 52 red (photo - Kazennova E.Yu., <http://www.forumavia.ru>).

Author: [DIMMI](#)

Created: 30.08.2009 13:33:12

Comments: [44](#)

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M-60B (project)

DATA FOR 2015 (standard update)

M-60B (project)



Strategic bomber project. The development of the concept of a multi-purpose high-altitude subsonic aircraft (MVDS) was initiated by the V.M. Myasishchev EMZ Design Bureau in 1979. Chief Designer - M.A. Guryanov (from 1994 to 1997, before that the head of the research topic), deputy - B.M. Morkovkin. On February 26, 1986, the Minister of Aviation Industry I.S. Silaev issued an order to conduct R & D on the MVDS. In May 1985, the EMZ began the topic of "Theoretical, design and experimental research on the creation of a wide-body aircraft" (code "60"). In early 1986, a technical proposal for the creation of a dual-purpose MVDS was prepared and submitted to the USSR MAP. On May 11, 1986, the USSR MAP issued order No. 1114 on conducting R & D on topic "60". In late 1989, an agreement was concluded between EMZ and the USSR Ministry of Aviation Industry for the development of a preliminary design for a dual-purpose MVDS. On May 15, 1991, the preliminary design materials for the civil version of the aircraft were reviewed by the USSR Ministry of Aviation Industry, which decided to prepare the technical specifications for the development of the aircraft. In July 1991, the preliminary design materials were presented to the military Customer's commission, which approved the materials and recommended developing a preliminary design for the aircraft. In October 1991, an agreement was signed for the development of the preliminary design for the M-60.

As of November 1998, EMZ im. V. M. Myasishchev is taking part in the Russian Air Force competition for the development of a strategic aviation aircraft with the M-60B aircraft design ([source](#)). It was planned that the winner would be announced in 1999, but in the end, only the requirements for the Prospective Long-Range Aviation Complex (PAK DA) were formulated. In addition to the M-60B, projects from the Tupolev and Sukhoi Design Bureaus also participated in the competition.

The development of the bomber project was discontinued in 2001.



Model of the M-60B aircraft in the Gromov Flight Research Institute museum, February 2012 (photo - Evgeny Erokhin, <http://missiles2go.ru/>).

Author: [DIMMI](#)

Created: 15.02.2015 15:02:40

Comments: [14](#)

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Il-96-400TZ

DATA FOR 2015 (standard update)

ИИ-96-400TZ



Refueling aircraft. On 06.01.2015, the press service of the Russian Ministry of Defense reported that a contract had been signed between the Ministry of Defense and UAC for the delivery of two ИИ-96-400TZ aircraft for the Russian Air Force. The development of the aircraft was proposed to the Russian Ministry of Defense, probably in the summer of 2013, based on the ИИ-96-400T transport aircraft. The aircraft will probably be delivered in 2017-2019.



Transport aircraft ИИ-96-400T, tail number RA-96104, at the VASO airfield, 10/31/2011 (photo - Alexey Borisov, <http://russianplanes.net/id57641>).

Author: [DIMMI](#)

Created: 01/09/2015 00:19:57

Comments: [6](#)

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X-90 / GELA - AS-X-21

DATA FOR 2012 (standard update)

Missile X-90 / B-239 - AS-X-21

Missile GELA



Long-range hypersonic cruise missile (project) / hypersonic experimental aircraft (GELA). The Kh-90 missile was developed by the Raduga Design Bureau (Dubna) jointly with TsAGI in the 1980s to replace the Kh-55 CRBD in service with Long-Range Aviation. General Designer - I.S. Seleznev. The development was a continuation of the work on creating a hypersonic missile, which began at the Raduga Design Bureau in the early 1970s with the creation of the Model 1 (tested in 1973-1978) and Model 2 (1980-1985) hypersonic prototypes. Preparation for production and production of missiles on the B-239 theme by the Raduga Design Bureau began in 1986 at the Tushino Machine-Building Plant. In addition to several technological and design prototypes of the B-239, three flight prototypes of the missile were built. We have no information about successful flight tests of the Kh-90.

Based on the Kh-90 missile project, an experimental hypersonic vehicle, the GELA, was created and allegedly tested in the late 1980s and early 1990s ([source](#)). According to unconfirmed information from TV programs, the first flight tests of either the Kh-90 or GELA prototype took place at the Engels airbase in early December 1987. Bench tests of the SPVRD for the GELA, designed for a cruising speed of 4.5M, were successfully completed in October 1988. Work on the Kh-90 project was stopped in 1992. The GELA vehicle was first demonstrated to the public at the MAKS-1995 air show in Ramenskoye.

When describing the Kh-90/GELA missile in various media and other sources (including well-deserved ones), confusion often arises with the [Meteorite cruise missile - AS-X-19 KOALA](#) . Accordingly, the Kh-90 missile is sometimes mistakenly attributed with some incorrect performance characteristics, chronology, etc. information. One of the reasons for the confusion is the identical aerodynamic schemes of the two missiles and the chronological proximity of the work on them.



The hypersonic experimental aircraft GELA on display at the MAKS-1995 air show (<http://vnfawing.com/> , processed).

Author: [DIMMI](#)

Created: 02.10.2012 14:49:09

Comments: [22](#)

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Il-82 / Il-76SK / Il-76VKP

DATA FOR 2014 (standard update)

Il-82 / Il-76SK / Il-76VKP / product 82 / 9A9676

★★★

Airborne command post / airborne control post of the General Staff of the Armed Forces of the Russian Federation. The aircraft is designed to control the armed forces during a conflict with the use of nuclear weapons. Analogue - ~~Il-80~~ / ~~Il-86VKP~~ . Developed by the Ilyushin Design Bureau in the 1980s on the basis of the Il-76MD transport aircraft. A total of two aircraft were built, which initially, as Il-76MD, had registration numbers USSR-76450 and USSR-76451.

The first flight of the USSR-76450 aircraft was on April 27, 1987. Since 1993, the registration numbers RA with the same digits. They are part of the regular composition of the 3rd Aviation Squadron of the 8th Special Purpose Aviation Division, military unit 22737 (Chkalovsky Airfield, GLITs, Moscow Region). Il-76VKP - aircraft designation in the design bureau before it was accepted into service. Il-76SK - special command.

On April 15, 1997, the Russian Ministry of Defense signed an agreement with the Ilyushin Aircraft Company to perform the R&D work "Development of a preliminary technical project for the modernization of version 80 and version 82" (~~Il-80~~ and Il-82). By mid-2008, it was supposed to complete the next stage of the R&D work - the development of working design documentation for the modernization of the Il-82. The deadline for completing this stage of the R&D work was set from 01.05.2007 to 15.06.2008. As of February 2010, this stage had not been completed (*source - Court cases...*).



(C)Anatoly Burtsev 1999-2024

RussianPlanes.NET

Il-82 / Il-76SK registration No. RA-76450, Chkalovsky airfield, March 2011 (photo - Anatoly Burtsev, <http://russianplanes.net/id98782>).

Author: [DIMMI](#)

Created: 13.07.2012 09:23:40

Comments: [Z](#)[READ THE FULL ARTICLE →](#)

MiG-19 - FARMER

DATA AS OF 2014 (in progress)**MiG-19 / MiG-19F - FARMER-A****MiG-19P - FARMER-B****MiG-19S / MiG-19SV / MiG-19SF - FARMER-C****MiG-19PF - FARMER-D****MiG-19PM - FARMER-E**

★★★★

Frontline fighter. Developed by OKB-155 of A.I. Mikoyan and M.I. Gurevich. Research and development work on creating a twin-engine supersonic fighter was started by OKB-155 in 1951. The experimental prototype I-340 (SM-1) was built on the basis of the MiG-17F with two AM-5 engines in 1951 and made its first flight on April 19, 1952 (test pilot K.K. Kokkinaki). The experimental prototype I-360 (SM-2) was built in early 1952 and performed its first flight on May 24, 1952 (test pilot G.A. Sedov). The second copy - the prototype SM-2/2 took off in October 1952. On August 15, 1953, the USSR Council of Ministers adopted Resolution No. 2181-887 on the development of a twin-engine supersonic frontline fighter in addition to the single-engine one. The twin-engine SM-9 was planned to be equipped with AM-9F engines, the single-engine - with a VK-7 (I-370) engine. The start of state tests of the SM-9 was scheduled for April 1954. The development of the SM-9 was supervised by Deputy Chief Designer N.Z. Matyuk, the lead engineer was V.A. Arkhipov, the calculation group was headed by K.K. Vasilchenko.

Construction of two SM-9 prototypes based on the SM-2 experimental aircraft began in 1953. SM-9/1 was ready in December 1953, and on December 21, its airfield tests began. The SM-9/1 made its first flight on January 5, 1954 (test pilot G.A. Sedov), lead test engineer - V.A. Arkhipov, deputy - V.A. Mikoyan. During the second flight, with the afterburner on, the SM-9/1 reached a speed of Mach 1.25 at an altitude of 8,050 m. Later, it was possible to obtain a speed of Mach 1.33, and with a descent at an altitude of 10,600 m - Mach 1.44. During the check of the spin characteristics, uneven operation of the engines was discovered. The air intake was modified - they returned to the design of a straight partition, previously used on the experimental SM-1 and SM-2 and dividing the air intake into two channels, which made it possible to simultaneously reduce the likelihood of engine surge and when firing from the fuselage cannon. The first flight after modifications took place on August 12, 1954 ([source](#)).

On August 30, 1954, the experimental SM-9/1 was delivered to the State Research Institute of the Air Force for state tests, which began on September 3, 1954. The leading test pilots were Lieutenant Colonel V.G. Ivanov and Major N.A. Korovin, the test pilots were the head of the institute, Lieutenant General of Aviation Blagoveshchensky, Colonel Yu.A. Antipov, Lieutenant Colonels Molotkov, V.S. Kotlov, G.T. Beregovoy, Treshchev, Majors V. Makhalin, A.G. Solodovnikov, Lapshin, Unitsky, Captain Tsikunov. In total, eight pilots from the State Research Institute of the Air Force participated in the state tests, two pilots from NIP-4 (scientific testing ground), the rest from combat units. The tests were supervised by engineer Yu.M. Kalachev. Due to various defects, the flights were interrupted several times, which delayed the tests until March 1, 1955. During the tests, the missile and bomb armament were not tested, flights with external tanks, spins, and canopy jettisoning were not performed ([source](#)).

MiG-19PM fighter with K-5M/RS-2U missiles ([source](#)).Author: [DIMMI](#)

Created: 10.09.2014 00:33:45

Comments: [16](#)[READ THE FULL ARTICLE →](#)

R-60 / R-60M - AA-8 APHID

DATA FOR 2014 (standard update)**Rocket K-60 / R-60 / product 62 - AA-8A APHID-A****R-60K missile - export version****K-60M / R-60M / product 62M - AA-8B APHID-B R-60MK****missile - export version - AA-8C APHID -C**

★★★★

A short-range missile. Developed by OKB-4 of M.R. Bisnovat (now NPO Molniya). The study of the concept of a close-range missile was started in the late 1960s by the Research Institute-2 of the USSR Ministry of Aviation Industry (GosNIIAS) under the supervision of R.D. Kuzminsky and V.F. Levitin. It was proposed to create the K-60 missile based on the 9M31 SAM of the *Strela-1* air defense system developed by KBTM of Chief Designer A.E. Nudel'man - in the same dimensions, with the same, relatively light, warhead. The development of the new missile was started by OKB-4 in 1968, under the supervision of Chief Designer M.R. Bisnovat and his First Deputy V.I. Elagin, and the leading designers were A.L. Kegeles, G.N. Smolsky and I.N. Karabanov. Officially, the development of the missile was assigned to OKB-4 by the Resolution of the Council of Ministers of the USSR dated January 21, 1970.

In 1969, technical documentation for the K-60 missile was prepared and the production of the first experimental batch of missile sections (28 units) began. In 1971, the development of the seeker head on a flying laboratory aircraft began. In the same 1971, missile launches began - at the first stage, launches were carried out from a ground launcher using tracers on a test site tower (range from 500 to 1500 m, 6 launches), then tests were conducted from the MiG-21SMT flying laboratory aircraft, board No. 117 (4 autonomous launches and two launches of telemetric missiles at parachute targets). Also in 1971, two MiG-23M (aircraft numbers 602 and 605) were connected to the

tests, and since 1972, two more MiG-23M (aircraft numbers 1701 and 1801) were added. The chief designer's testing stage was completed in August 1972. In total, during 17 launches performed in 1971 and 43 launches in 1972, 7 MiG-17 and La-17 targets were shot down. In 1973, more than 50 missile launches were performed during the State Tests. The launches were carried out from MiG-21SMT and MiG-23 (aircraft numbers 2503, 1201, 1901, 1231).

On December 18, 1973, the missile under the designation R-60 was accepted into service. Serial production of the missile was carried out from 1974 to 1991 at the Tbilisi Aviation Plant. In total, the plant produced more than 30,000 missiles, in some years the production rate reached 6,000 units per year. Also, until 1991, the missile was produced by the Izhevsk Mechanical Plant (Izhevsk) and the Moscow Kommunar Plant (now Duks).

The first mention in the Western specialized press - 1976 - Western observers first noticed the missile on the suspension of the MiG-23. By default, the data of the R-60 missile.



R-60M missile on the PU-62-1 suspension unit, MAKS-2007 air show (photo - VovanJorf, <http://fotki.yandex.ru>).

Author: [DIMMI](#)

Created: 25.01.2009 00:11:28

Comments: [16](#)

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Prospective attack helicopter

DATA AS OF 2014 (standard update)

Prospective attack helicopter Project of a prospective attack helicopter / "fifth generation helicopter". In 2008, the Commander-in-Chief of the Russian Air Force A. Zelin first announced work on developing a new generation helicopter. The conceptual model of a new generation combat helicopter is being developed by the Mil and Kamov design bureaus, which are part of the Russian Helicopters holding company. On June 7, 2010, Mil Design Bureau General Designer Aleksey Samusenko announced that R&D on creating a new generation combat helicopter is planned to begin in 2011. Both helicopter design bureaus will take part in the work on the concept. The introduction of generations in the chronology of combat helicopter creation raises certain questions. But if we proceed from the history of domestic technology, it would be logical to consider [the Mi-4](#) generation as the first generation of combat helicopters - i.e. the creation of combat vehicles based on helicopters in general, the second - [the Mi-24](#) - the creation of specialized combat helicopters, the third - the Mi-28 and Ka-50 - advanced specialized anti-tank helicopters of the 1980s. In this case, the fourth generation includes [the Mi-28N](#) and [Ka-52](#) - multi-purpose all-weather helicopters with modern avionics.



Author: [DIMMI](#)

Created: 04.12.2011 01:13:41

Comments: [11](#)

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R-73 / RVV-MD - AA-11 ARCHER

DATA AS OF 2014 (standard replenishment)

Missile K-73 / R-73 / "article 72" / "R-72" - AA-11 ARCHER

Missile R-73 / R-73RMD1 - AA-11 ARCHER

Missile R-73M / R-73RMD-2 / RVV-MD - AA-11 ARCHER-M

Missile K-73E / R-73E (export)

Missile K-74ME (export model based on R-73M)

Missile K-74M2 / RVV-MD - AA-11 ARCHER-M



Short-range air-to-air missile. Development of the highly maneuverable K-73 close-range air combat missile, as a development of the K-60 missile, was started by the Molniya Design Bureau (OKB-4 M.R.Binovata) in accordance with the Decree of the USSR Council of Ministers dated July 26, 1974. Chief Designer - M.R.Bisnovata. According to the initial design, the missile was created without taking into account the all-aspect homing head and only with gas-dynamic control. It was probably planned to use a modified homing head of the [K-60](#) missile. After choosing the all-aspect homing head "Mayak" developed by PO "Arsenal", a modern aerodynamic configuration with a change in the dimensions of the missile was adopted at a meeting led by the deputy chief designer of the missile G.P.Demetyev. Probably, this adjustment of the project took place in 1976. In 1977, after the death of M.R. Bisnovat, G.I. Khokhlov became the chief designer of the missile.

Since October 1978, the development of the seeker head was carried out on the LL-124 flying laboratory aircraft based on the Tu-124. Testing of simplified prototypes of K-73 missiles from ground launchers began in 1979. The operation of gas-dynamic control surfaces was developed. In the same 1979, 8 flights of the MiG-23ML (side No. 123) and three launches of K-73 missiles were performed as part of factory tests. In 1980, a MiG-17 flying target was shot down for the first time from this MiG-23ML. In 1981, the third serial MiG-29 (No. 9-19) joined the tests; it shot down a MiG-21M target.



A training and operational model of the R-73L missile with an optical fuse. Equipment exhibition in Ramenskoye, 100th anniversary of the Russian Air Force, 12.08.2012 (photo - pfc-joker, <http://pfc-joker.livejournal.com>).

Author: [DIMMI](#)

Created: 25.01.2009 00:35:42

Comments: [20](#)

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Electronic warfare complex Khibiny

DATA AS OF 2014 (standard replenishment)

L-175 / L-175V "Khibiny-10V"

EW Complex KS-418 "Khibiny" EW

Complex L-265 "Khibiny-M" EW Complex

"Khibiny-U" EW



Complex Multifunctional air-based electronic warfare / suppression (EW / EC) complex. Developed as part of the "Khibiny" R&D project by the Kaluga Research Radio Engineering Institute (KNIRTI, part of KRET), the chief designer of the complex is Aleksandr Semenovitch Yampolsky. Research into electronic intelligence (EW) complexes combined with active jamming stations, which subsequently led to the development of the "Khibiny" complex, was started by KNIRTI in 1977 (see below). In 1984, the Khibiny-10V complex was already being developed to arm the T-10V / Su-34 aircraft. In 1990, the first sample of the L175 complex, created within the framework of the Khibiny R&D, passed acceptance tests. By the mid-1990s, its container version, the L-175V, was developed for equipping Su-34 aircraft.

Tests of the L-175V container of the Khibiny-10V complex began in January 1995. The second stage of testing began on the Su-34 in Ramenskoye in August 1997. On March 18, 2014, the L-175V complex was accepted as part of the Su-34 aircraft armament into service with the Russian Air Force.

In August 2013, at the MAKS-2013 air show, KNIRTI and the Russian Ministry of Defense signed a contract to perform R&D work on the creation and testing of the Khibiny-U electronic warfare system for frontline aircraft. The contract amount is 1.6 billion rubles. In addition to KNIRTI, the Ekran Research Institute (Samara) will also participate in the development. As part of the R&D work, the system will be installed on the Su-30SM aircraft ([source](#)).

The electronic warfare system provides protection for the aircraft from anti-aircraft and air-launched weapons.



Container of the electronic warfare system "Khibiny" L-175V on the Su-34 aircraft, side No. 04 red ([source](#)).

Author: [DIMMI](#)

Created: 27.04.2014 02:39:52

Comments: [31](#)

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An-70

DATA AS OF 2014 (standard replenishment)

An-70



Short takeoff/landing transport aircraft. Development of the aircraft project was started by Antonov ASTC / P.O. Box A-3395 (Kiev) in 1987 based on the Resolution of the CPSU Central Committee and the USSR Council of Ministers dated 23.07.1984 No. 797-173, the Order of the MAP dated 20.08.1984 No. 378, as well as the Resolution of the CPSU Central Committee and the USSR Council of Ministers dated 20.05.1987 No. 587-132 and the Order of the MAP dated 01.07.1987 No. 340 and the decision of the Military-Industrial Complex of the USSR Council of Ministers dated 10.02.1989 No. 44. The Customer (military unit No. 25966-A) and the Contractor (ANTK) signed contract No. 91078 on 16.05.1989, according to which experimental design work was carried out on the topic of "Creation of the An-70 aircraft (1st flight copy, copy for static tests, copy for fatigue tests)". The aircraft was intended to replace the mass-produced An-12 transport aircraft in military transport aviation (MTA) units.

On June 24, 1993, the Governments of Russia and Ukraine signed an agreement on further cooperation in ensuring the creation, joint serial production and supply of the An-70 military transport aircraft and its civil transport version An-70T with D-27 engines into operation. This agreement designated the Ministries of Defense of Ukraine and Russia as the Customers. On August 23, 1993, the parties signed the Agreement Protocol to contract No. 91078 dated 16.05.1989 on continuation of work on creation of the aircraft and production within one month of correction of the performance statement and recalculation of the cost of works under the contract. By joint decision it was determined that implementation of experimental design work on the aircraft since 1992 is carried out under separate contracts of ANTK im. OK Antonov with Customers.

The first flight of the prototype took place in Kiev on December 16, 1994. In total, as of 2012, two prototypes of the An-70 were built, but the first of them was lost in 1995. Beginning in 2002, the Russian Ministry of Defense showed its interest in the aircraft creation program. Due to complaints in 2010, the An-70 test program was suspended and modernization of the aircraft began.



An-70, tail number UR-NTK, in new paint, Kiev, Gostomel airfield, 04/09/2013 (photo - Vitaly Nesenyuk, <http://russianplanes.net/id103720>).

Author: [DIMMI](#)

Created: 06.10.2011 08:12:57

Comments: [21](#)

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Hornet (project)

DATA FOR 2014 (requires updating)

"Shershen" / R&D "Shershen-EP" (project)



Project of a promising attack aircraft. The development of the attack aircraft has been carried out by Sukhoi Holding Company since at least 2013 - in October 2013, Sukhoi Holding Company received a loan in the amount of 210 million rubles to fulfill a state contract for the development of a preliminary technical project of the R&D project "Prospective attack aircraft based on the Su-25 aircraft (code "Shershen-EP")" ([source](#)).

On March 19, 2014, the press service of the Ministry of Defense reported that the project of the promising attack aircraft "Shershen" will be included in the number of pilot projects with management of the full life cycle of the weapon system ([source](#)).

There is no other information yet.

Author: [DIMMI](#)

Created: 23.03.2014 00:32:52

Comments: [1](#)

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9K121 / 9K121M Vikhr - AT-16 SCALLION

DATA FOR 2014 (standard update)

9K121 Vikhr complex, 9A4172 Vikhr missile - AT-16 SCALLION

9K121M Vikhr-M complex, 9A4172K Vikhr-1 missile - AT-16 SCALLION



Airborne anti-tank missile system. Developed by the Instrument-making Design Bureau (NPO Tochnost, Tula), Chief Designer - [A.G. Shipunov](#). Development of the system began in 1980. Tests - 1982. Troop trials since 1989. The 9K121 system was accepted into service in 1992. The system was manufactured by PO Izhmash. An improved missile of the Vikhr-M system was first publicly shown at the Farnborough Air Show in 1992.

A contract for the production of the Vikhr-1 ATGM was signed between the Russian Ministry of Defense and NPO Izhmash (Kalashnikov Concern) on 22 July 2013 for the amount of 13 billion rubles with the condition of fulfillment by the end of 2015. A trial batch is planned to be released and tests of the Vikhr-1 missiles to be conducted by the end of 2013.



ATGM "Vikhr" and NUR block S-8 UB-20 under Ka-50

Author: [DIMMI](#)

Created: 18.01.2009 01:47:24

Comments: [1](#)[READ THE FULL ARTICLE ->](#)

MiG-9 - FARGO

DATA AS OF 2014 (in progress)

MiG-9 / I-300 - FARGO

★★★

Fighter. Developed by OKB-155 A.I. Mikoyan and M.I. Gurevich. In May 1945, the design of the I-260 aircraft with two engines placed under the wing was started, and in June, the development of the I-300 fighter (factory code "F") with two BMW-003 engines in the fuselage was started. The roll-out of the first prototype was scheduled for October 15, 1945. Lead engineer for the project was A.G. Brunov, lead engineer for flight tests was A.T. Karev. In late autumn 1945, the working design of the I-300 was approved and construction of a mock-up was started, and the design bureau's pilot production facility began manufacturing aircraft units and components. The official assignment for the development of the I-300 was given to OKB-155 by Resolution of the Council of People's Commissars of the USSR No. 472-191 dated February 26, 1946 and Order of the People's Commissariat of the Aviation Industry No. 157 dated March 27, 1946. The resolution specified the construction of three I-300 prototypes with the presentation of the first for flight tests on March 15, 1946.

The first prototype of the I-300 - the F-1 aircraft - was completed in production and transferred for testing at the end of December 1945. Ground tests of the aircraft with the power plant were conducted over the course of four months. On March 23, 1946, the F-1 aircraft was delivered to the Flight Research Institute. On April 12, 1946, test pilot A. N. Grinchik performed an engine run and taxiing on the aircraft on the platform in front of the hangar, and on April 15 - taxiing with approach. After eliminating the defects found during this, on April 19, an approach was made to a height of up to four meters with a headwind of 8 m/s. The takeoff run before the approach was 400-450 meters. The approach length with flaps extended to 15 degrees was 300 meters, with flaps extended to 55 degrees - 400 meters. The landing run after the approach was 600 meters.

Then the preparation of the aircraft for the first flight was started. The center of gravity for this was set to 25.8% MAC, the landing 23.5% MAC. Kerosene was completely poured into the first and second fuselage tanks and into the supply tank, and 134 kg into the wing tanks. Instead of the 57-mm H-57 cannon, located in the central bulkhead of the air intake, a blank was installed. The two 23 mm NS-23 cannons located at the bottom of the forward fuselage were left in place. The ammunition was not loaded, and 30 kg of cargo was placed in the cartridge box for the N-57 cannon. On the evening of April 23, 1946, permission was received for the first flight.

On April 24, 1946, at 11:12, pilot A. N. Grinchik took off in an I-300 F-1 aircraft. On the same day, at 13:56, test pilot M. I. Ivanov made the first 6-minute flight in a Yak-15 fighter. Later, the second (May 7) and third (May 11) flights of the F-1 aircraft were carried out practically without any comments.

The first prototype of the MiG-9 - I-300, 1946 (<http://www.airwar.ru/>).Author: [DIMMI](#)

Created: 16.02.2014 23:25:58

Comments: [Z](#)[READ THE FULL ARTICLE ->](#)

La-160 Strelka

DATA AS OF 1997 (requires updating, in progress)

La-160 "Strelka"



Experimental fighter with swept wing. Developer - OKB S.A. Lavochkin. The first jet aircraft with swept wing in the USSR. Development - 1946-1947. The aircraft made its first flight in June 1947 (pilot I.E. Fedorov).

La-160 "Strelka" (<http://www.airwar.ru/>).Author: [DIMMI](#)

Created: 10.03.2014 12:42:06

Comments: [3](#)[READ THE FULL ARTICLE →](#)[La-152 / La-154 / La-156 / La-176TK](#)

DATA AS OF 1997 (requires updating, in progress)

La-152 / La-154 / La-156 / La-176TK



Experimental fighters with laminar wing profiles. Developer - S.A. Lavochkin Design Bureau. Development began in 1946, the La-152 made its first flight in 1946.

La-174TK - "Thin Wing".

Aircraft La-156 (<http://crimso.msk.ru/>).Author: [DIMMI](#)

Created: 08.03.2014 23:30:45

Comments: [1](#)[READ THE FULL ARTICLE →](#)[Mi-26 - HALO](#)

DATA AS OF 2014 (standard replenishment)

Mi-26 / article 90 - HALO



Heavy transport helicopter. Developed by the Mil Design Bureau. The first prototype was assembled at the Mil Moscow Helicopter Plant in Panki. Its first flight was on December 14, 1977 (test pilot - G.R. Karapetyan). It has been and is being mass-produced by the Rostov Helicopter Plant (Rostvertol) since 1984.

As of 2011, a total of 310 machines have been produced. As of 2011-2012, the helicopter remains the only serial transport helicopter in the world with a lifting capacity of over 20 tons.



Mi-26, flight number 88 red, Russian Air Force in Kubinka, April 2009 (photo - Maxim Bryansky, <http://www.airliners.net>).

Author: [DIMMI](#)

Created: 17,09,2011 23:47:54

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